

## REMARKS

This paper is submitted in response to the Office Action. By this paper, claims 1 and 14 are amended. Claims 36-46 were withdrawn in a previous paper. Claims 1-35 remain pending.

Reconsideration of the application is respectfully requested in view of the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

### **I. General Considerations**

#### **a. claim amendments**

With particular reference to the claim amendments, Applicant notes that while claims 1 and 14 have been amended herein, such amendments have been made in the interest of expediting the allowance of this case. Notwithstanding, Applicant, may, on further consideration, determine that claims of broader scope than those now presented are supported. Accordingly, Applicant hereby reserves the right to file one or more continuing applications with claims broader in scope than the claims now presented.

Consistent with the points set forth above, Applicant submits that neither the claim amendments set forth herein, nor any other claim amendments, claim cancellations or statements advanced by the Applicant in this or any related case, constitute or should be construed as, an implicit or explicit surrender or disclaimer of claim scope with respect to the cited, or any other, references.

#### **b. remarks**

Applicant respectfully notes that the remarks herein do not constitute, nor are they intended to be, an exhaustive enumeration of the patentable distinctions between any cited references and the invention, example embodiments of which are set forth in the claims of this application. Rather, and in consideration of the fact that various factors make it impractical to enumerate all the patentable distinctions between the invention and the cited art, as well as the fact that the Applicant has broad discretion in terms of the identification and consideration of the base(s) upon which the claims distinguish over the cited references, the

distinctions identified and discussed herein are presented solely by way of example. Consistent with the foregoing, the discussion herein is not intended, and should not be construed, to prejudice or foreclose contemporaneous or future consideration by the Applicant, in this case or any other, of: additional or alternative distinctions between the invention and the cited references; and/or, the merits of additional or alternative arguments.

Applicant notes as well that the remarks, or a lack of remarks, set forth herein are not intended to constitute, and should not be construed as, an acquiescence, on the part of the Applicant: as to the purported teachings or prior art status of the cited references; as to the characterization of the cited references advanced by the Examiner; or as to any other assertions, allegations or characterizations made by the Examiner at any time in this case. Applicant reserves the right to challenge the purported teachings and purported prior art status of the cited references at any appropriate time.

## **II. Claim Rejections Under 35 U.S.C. §112**

The Examiner has rejected claims 1 and 14 under 35 U.S.C. §112, second paragraph, as being indefinite. In light of the amendments to claims 1 and 14 herein, Applicant respectfully submits that the rejections of claims 1 and 14 under 35 U.S.C. §112, second paragraph, have been overcome and should be withdrawn.

## **III. Claim Rejections Under 35 U.S.C. §103**

Applicant respectfully notes at the outset that in order to establish a *prima facie* case of obviousness, it is the burden of the Examiner to clearly articulate the reason(s) why the claimed invention would have been obvious to one of ordinary skill in the art at the time the invention was made. See *Manual of Patent Examining Procedure* (“MPEP”) § 2141.III. As stated by the U.S. Supreme Court in *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. \_\_\_\_, 82 USPQ2d 1385 (2007), the analysis supporting a rejection made under 35 U.S.C. § 103 should be made explicit. Moreover, the Court also stated in *KSR* that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.* at 1396.

The Examiner has rejected claims 1, 2, 5, 7-11, 14, 19, 20, 23-28, 33, and 34 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,627,920 to

Schroeder et al. ("*Schroeder*") in view of "Identification of Blur Parameters from Motion Blurred Images," by Y. Yatzhaky and N. S. Kopeika ("*Yatzhaky*"). The Examiner has also rejected claims 3, 4, 6, 12, 13, 21, and 22 under 35 U.S.C. § 103(a) as being unpatentable over *Schroeder* and *Yatzhaky* and further in view of "Direct Method For Restoration Of Motion-Blurred Images," by Yitzhaky, Mor, Lantzman, and Kopeika ("*Mor*"). The Examiner has also rejected claims 15-17 and 29-31 under 35 U.S.C. § 103(a) as being unpatentable over *Schroeder* and *Yatzhaky* and further in view of "Local Scale Control for Edge Detection and Blur Estimation," by Elder and Zucker ("*Elder*"). Applicant respectfully disagrees with each of the foregoing rejections, and traverses in view of the following comments.

In the rejection of independent claim 1, the Examiner has asserted that:

Regarding claim 1, Schroeder teaches a method of correcting blur in a motion blurred image...comprising: ...comparing the blurred guess image with the motion blurred image to generate an error image; blurring and weighting the error image; and combining the error image and the initial guess image thereby to update the guess image and correct for blur (Abstract and col. 1, lines 34-45).

*Office Action, page 3 and (emphasis added).* Similarly, in the rejection of independent claim 14, the Examiner has asserted that:

Regarding claim 14, Schroeder teaches method of correcting blur in a motion blurred image comprising: ...comparing the blurred guess image with the motion blurred image to generate an error image; blurring the error image; and combining the error image and the initial guess image thereby to update the guess image and correct for blur (Abstract and col. 1, lines 34-45).

*Office Action, page 4 and (emphasis added).*

Despite these assertions by the Examiner, however, the Examiner has failed to demonstrate that *Schroeder* teaches at least the following three elements of amended claims 1 and 14 (numbered for the convenience of this discussion): 1) "generat[ing] an **error image**," 2) "blurring [and weighting] the **error image**," and 3) "combining the **error image** and the initial guess image thereby to update the guess image and correct for blur in the guess image." As noted in paragraph [0043] of the specification, in at least some example embodiments, the generation and manipulation of the "error image" element of claims 1 and 14 may contribute to a

reduction in "unnecessary correction and overcorrection." Although the Examiner has asserted that the generation and specific manipulation and use of the "error image" recited in claims 1 and 14 are taught by *Schroeder*, Applicant is unable to decipher from the Examiner's assertions any attempt by the Examiner *to articulate exactly how* *Schroeder* teaches this specific limitation. For example, the Examiner has made no attempt to identify which element of *Schroeder* corresponds to the "error image" required by claims 1 and 14. Nor has the Examiner made any attempt to identify which elements of *Schroeder* correspond to "blurring [and weighting] the error image" and "combining the error image and the initial guess image" as required by claims 1 and 14.

As a point of fact, instead of generating an *intermediate* "error image" as is explicitly required by claims 1 and 14, the methods of the portions of *Schroeder* cited by the Examiner instead appear to include the following three steps (numbered for the convenience of this discussion): 1) "identifying certain parameters, e.g., direction and displacement," 2) "using the parameters to transform the distortion into an additive periodic component in the picture (blur)" and 3) "estimating (or identifying) and subtracting the periodic components from the picture." *Abstract; see also column 1, lines 34-45*. Although these three steps of *Schroeder* appear to remove blur resulting in "a replica of the original scene," column 1, lines 43-45, they *do not* teach or suggest doing so by utilizing the claimed "error image" element of claims 1 and 14 cited above.

For example, none of these three steps from *Schroeder* contemplate or even resemble the generation of a separate "error image" and "blurring [and weighting] the error image," as recited in claims 1 and 14. In particular, the "additive periodic component" of *Schroeder* is not equivalent to the "error image" recited in claims 1 and 14, and nowhere in the portions of *Schroeder* cited by the Examiner does *Schroeder* teach or suggest "blurring [and weighting]" the "additive periodic component." Instead, as presently understood, once the "additive periodic component" of *Schroeder* is "estimated (or identified)," it is simply used to remove blur from the original photograph by being "subtracted from the composite picture," *without* undergoing any intermediate "blurring [and weighting]," *Column 1, lines 44-46*. This is in direct contrast to the claimed invention, which specifically requires a specific manipulation and use of an "error image." Nowhere is this limitation

taught or suggested by *Schroeder*, nor has the Examiner asserted that the “error image” limitation would have been obvious in light any teaching of *Yatzhaky*.

In summary, the Examiner has failed to demonstrate that *Schroeder* expressly teaches or otherwise suggests the generation and manipulation of an intermediate “error image” to correct blur in a motion blurred image. Applicant thus submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to amended claims 1 and 14 at least because the Examiner has failed to demonstrate that the references, when combined in the purportedly obvious fashion, teach or suggest all the elements of amended claims 1 and 14. Applicant accordingly submits that the rejections of claims 1 and 14, and the rejections of claims 2-13, 15-17, 19-31, 33, and 34 which each depend from either claim 1 or claim 14, should be withdrawn.

#### **IV. Allowable Subject Matter**

The Examiner has indicated that claims 18, 32, and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In view of the discussion of the rejection of independent claim 14 set forth herein, from which claims 18, 32, and 35 each depend, Applicant respectfully declines to rewrite claims 18, 32, and 35 at this time.

**CONCLUSION**

In view of the foregoing, Applicant believes that claims 1-35 are in allowable form. In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact Applicant's attorney, Eric Maschoff (36,596) at (801)533-9800.

Respectfully submitted,

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